

Psychiatric Disorders in an HIV-Infected Patient (About a Case)

B. Raouf^{1*}, A. Hamdaoui¹, I. Adali¹, F. Manoudi¹

¹Ibn Nafis Psychiatric University Hospital of Marrakech, Faculty of Medicine and Pharmacy of Marrakech, Morocco

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*Corresponding author: B. Raouf

Ibn Nafis Psychiatric University Hospital of Marrakech, Faculty of Medicine and Pharmacy of Marrakech, Morocco

Abstract

Original Research Article

Human immunodeficiency virus (HIV) infection today affects all countries, particularly those in sub-Saharan Africa. objective of this on the one hand to evaluate the nature of psychiatric disorders in patients with HIV and on the other to detect possible predictive factors for the occurrence of these disorders. And compare it with our patient with HIV/AIDS receiving combined antiretroviral therapy and assessment of mood, sleep measurements, health-related quality of life.

Keywords: (HIV) infection, psychiatric disorders, antiretroviral therapy.

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INTRODUCTION [1]

Infection by the human immunodeficiency virus (HIV) today affects all countries, particularly those in sub-Saharan Africa. The arrival of multiple antiretroviral therapies has considerably improved the situation of patients. But the difficulties of prevention and sometimes late detection of HIV status keep the epidemic at a significant level.

Constraints in daily life (regular biological tests, systematic clinical examinations, regular medication intake), the adverse effects of antiretrovirals, uncertainty about the future have a major psychological impact.

In Morocco, HIV prevalence in the general population remains stable and at a low level (0.11%). In fact, the cumulative number of HIV/AIDS cases declared from 1986 to the end of October 2013 is 8,040 cases.

The clinical course of HIV infection occurs in several phases:

- Primary HIV infection; Symptomatic phase.

The prevalence of mental disorders among people infected with HIV is considerably higher than in the general population. These disorders can appear at any time during the disease: when HIV status is announced, when starting antiretroviral treatment or during advanced stages of the disease.

Depression is the most common psychiatric symptom that motivates psychiatric consultation in people with HIV/AIDS;

The risk of depression in patients with HIV/AIDS is twice as high as that observed in the general population: 20 to 40% of patients infected with HIV.

Depressive symptomatology remains classic and not very specific: inhibition with abulia, asthenia, sometimes psychomotor slowing, sadness, pejorative vision of the future, self-devaluation or even guilt, but also irritability, aggressiveness. The initiation of antiretroviral treatment for HIV or with interferon A during the treatment of co-infection with the hepatitis C virus is also a risky period.

In the majority of cases, it is reactive depression with anxiety manifestation. This reaction can be triggered by various elements such as:

- The method of notification, the questions that arise when one is diagnosed with HIV or even the possible impact of a feeling of guilt,
- The progression of HIV infection,
- Pre-existing psychological fragility with possible psychiatric history,
- The psychosocial context with possibly the deterioration of the quality of life, the loss of professional ambitions, the emotional isolation, the loss or suicide of loved ones, the reactions

¹ Comparative effectiveness and acceptability of non-pharmacological interventions for depression in people

living with HIV: protocol for a systematic review and network meta-analysis. Ting Zhao et al. Plos One 2023

of those around them, the stigmatization, the lack of social support, the socio-economic status.

Anxiety is one of the most common psychiatric disorders encountered in people living with HIV [59, 60, 61]. It is more common among HIV-positive people than in the general population.

The suicide risk among HIV-positive people has been studied since the start of the epidemic, especially since the original study carried out in 1985 was particularly alarming: it estimated the relative figure as 36 times higher than that of a population paired.

Psychotic disorders may precede HIV infection. Patients with schizophrenia are at increased risk of becoming infected with HIV due to poor impulse control, impaired judgment, substance abuse, and high-risk sexual behaviors. [101,102] Although sexual activity tends to be less common among patients with schizophrenia, those who are sexually active are more likely to engage in high-risk behaviors.

The prevalence of drug use among HIV-infected patients appears to be high, making the diagnosis and appropriate treatment of psychiatric disorders difficult. The effects of substances can mimic the symptoms of certain psychiatric disorders. While people with anxiety disorders may use drugs or alcohol to manage anxiety symptoms, other drug users may develop anxiety disorders as a result of their use.

Cognitive Disorders:

AIDS dementia should be distinguished from moderate neurocognitive disorders linked to AIDS. The diagnosis of minor cognitive motor deficit associated with HIV is based on the presence for a month or more of acquired abnormalities, verified by appropriate neurological and neuropsychological tests, in at least two of the following cognitive domains: attention/concentration, speed of information processing (mental slowing), memory (recall disorder), executive functions (abstraction/reasoning), language (decrease in verbal fluency), motor performance (motor slowing, coordination disorders), behavioral regulation (change in social behavior, deterioration of emotional control). Despite the presence of these moderate cognitive disorders, patients remain able to carry out most usual daily activities (including professional life and social activities). Only the most complex activities such as maintaining their previous level of performance, remembering an appointment or taking a treatment can be disrupted occasionally.

Despite improvements in health care regimes over the past 20 years, the frequency of neurocognitive disorders remains high at 20 to 40%, with HIV-associated neurocognitive disorders (hand) affecting at least 25% of HIV patients in acute care. Of hand

presenting a wide range of signs and symptoms including affective disorders such as apathy and other motor and executive disorders.

Insomnia during HIV infection has multiple potential origins. It can be part of a characterized psychiatric disorder, ranging from anxiety disorders to mood disorders.

Risk Factors:

Homosexuality, sociodemographic risk factors, marital status, gender, unemployment and low income, clinical risk factors, comorbidities, advanced stage of the disease and degree of immunodeficiency, side effects antiretrovirals, Alcoholism and drug addiction, Black ethnicity, Social risk factors, Psychological risk factors.

II. OBJECTIVE

Mood disorders and neurocognitive impairments are debilitating conditions in patients with HIV/AIDS. The objective of this on the one hand is to assess the nature of psychiatric disorders in patients with HIV and on the other to screen possible predictive factors for the occurrence of these disorders.

III. METHODS

Our study is transversal with prospective recruitment covering a period of 3 months from October 1, 2011 to October 1, 2023, involving a patient infected with HIV hospitalized in our training at the Ibn Nafiss hospital in Marrakech.

In this HIV/AIDS patient receiving combined antiretroviral therapy and assessments of mood, sleep, and health-related quality of life.

A. The population Studied

The patient seropositive for hiv-1 in which the neurocognitive state was the main criterion of judgment hospitalized at the ibn nafissamarrakech hospital.

B. Data Collection:

- ⊖ Information collected for the patient: sex, ethical origin, years of study, current employment status, sexual orientation, duration of HIV-1 infection, current number of TCD4 lymphocyte, current plasma viral load, comorbidities, seropositive to the hepatitis C virus, past and present consumption of substances medical conditions: stroke, diabetes, hypothyroidism, head trauma, convulsion, multiple neuropathies linked to HIV, dyslipidemia, lipodystrophy.
- ⊖ Psychiatric history: Suicide attempt.
- ⊖ Characteristics of the disease □
 - The onset: date of diagnosis (duration of illness)
 - The circumstances of discovery
 - The mode of contamination

- The psychological reaction to the announcement of the illness
- The stage of the disease
- Complications
- Existence of other sexually transmitted diseases
- Therapeutic care

C. Measuring Tools:

1. The MINI:

The MINI makes it possible to determine a current or point prevalence (based on the last fortnight) of different disorders. This is not a whole life tool. However, for certain disorders, the MINI can make life-long diagnoses; on the other hand, it does not identify the age of onset.

The entire MINI contains 120 questions. The MINI, like the CIDI or the DIS, is a modular instrument, meaning that each module can be administered separately.

For each disorder, there are 2 to 4 filter questions allowing symptom screening; additional questions are asked if the answers to these few questions turn out to be positive, thus making it possible to validate or invalidate the diagnosis in question.

2. The Hamilton Anxiety Scale (HAMA):

The HAMA was presented by Hamilton in 1959 as an instrument for the quantitative assessment of neurotic anxiety. In 1976, it was included by the NIMH in the "ECDEU Assessment Manual". It was translated into French by P. Pichot. Finally, in 1982, Snaith *et al.*, derived a six-item scale, the "Clinical AnxietyScale", which they consider to be superior to the HAMA.

HAMA has been and still is widely used mainly during therapeutic trials of anxiolytics and antidepressants. It has constituted the reference scale for

numerous studies of concurrent validity and quantitative psychopathology.

We generally consider that a score between 0 to 4 corresponds to the absence of anxiety, that a score between 5 and 14 corresponds to minor anxiety, and that a score greater than 15 corresponds to major anxiety.

3. Beck's Abbreviated Depression Inventory:

The original 21-item form included all symptoms of the depressive constellation.

It alerts the clinician who uses the different severity thresholds used by Beck and Beamesderfer (1974):

- 0-4: no depression
- 4-7: mild depression
- 8-15: moderate depression
- 16 and over: severe depression

4. Scale of PHQ-9:

The Patient Health Questionnaire -9 (PHQ-9) is used to screen for depression and also an indication of the severity of depression. It is part of a battery of health questionnaires developed for psychological diagnostic purposes. Questionnaire items are based on the diagnostic criteria of the DSM IV (diagnostic and statistical manual of mental disorders).

On the day of testing, the patient was asked about their current health-related quality of life (HQoL: \How has your health been over the past 5 days? 1 = poor, 2 = fair; 3 = good; 4 = very good; 5 = excellent), number of days with, concerns about sleep quality, and number of hours of sleep per night.

Mood assessment the presence and severity of depressive symptoms were assessed by the Patient Health Questionnaire 9 (PHQ-9) assay and stratified in an established manner. For our patient is staged severe depression.

Table 1

Over the past 2 weeks, how often have you been bothered by the following problems? (Please tick (✓) your answer)	never	Several days	More than half the time	Almost every day
1. Little interest or pleasure in doing things	0	1	2	3
3. Difficulty falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or lacking energy	0	1	2	3
5. Having little appetite or eating too much	0	1	2	3
6. Having a low opinion of yourself, or feeling like you're worthless, or that you've disappointed your family, or that you've disappointed yourself	0	1	2	3
7. Having difficulty concentrating, for example, reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that others might notice. Or on the contrary, being so agitated that you had difficulty keeping still compared to usual	0	1	2	3
9. Thinking it would be better to die or considering harming yourself in some way	0	1	2	3

FOR OFFICE CODING 0 _____ + _____ + _____ + _____ =Total Score : _____

If you checked at least one of the problems listed, how difficult has this problem(s) made your work, your tasks at home, or your ability to get along with others? s)?

Not at all difficult(s) Quite difficult(ies) Very difficult(ies) Extremely difficult(ies)

Validated Screening Tool for HIV-Associated Neurocognitive Disorders (HAND):

The central nervous system is the second target of HIV and its attack is a very early event that occurs during the primary invasion of the virus. This neurological damage is the source of various complications including cognitive impairment linked to HIV identified at the start of the pandemic. Initially, cognitive disorders associated with human immunodeficiency virus (HIV) were due to HIV-related encephalitis, a formidable complication progressing to severe dementia. Central nervous system (CNS) damage can occur at all stages A, B or C of HIV infection. The hierarchical classification of HIV is mainly based on the presence or absence of symptoms, opportunistic

infection and CD4 count. Its prevalence varies from 40 to 70% in clinical studies and can even reach 100% in certain autopsy series.

HIV-associated neurocognitive disorders (HAND) are highly prevalent among people living with HIV (PLHIV) globally and are associated with significant morbidity and disability. Older PLHIV appear to be at greatest risk, with up to 50% of people affected in high-income countries.

HAND are poorly understood, but the contributing mechanisms highlighted include opportunistic infections of the central nervous system, the direct neurotoxic and inflammatory effects of the HIV virus, and the neurotoxic effect of combination antiretroviral therapy.

- The diagnosis and staging of HAND was established by the presence of impairments in 2 or more neurocognitive domains based on this schema:

Table 2

HIV-related neurocognitive disorders		
Revised NIMH-NINDS HAND criteria (antunori <i>et al.</i> , Neurology 2007)		
HIV TNC	Acquired deficit in or less 2 cognitive fields	Interference with activities of daily living.
Asymptomatic neurocognitive deficit (DNA)	<1AND Compared to the expected score	none
Mild neurocognitive disorder (NLD)	<1AND	light
HIV-associated dementia (HIVD)	<1AND	marked

Attention, language, memory, executive functions, information processing, complex perceptual-motor functions....

IV-RESULT:

1. Sociodemographic Characteristics:

- Age: The age of our patient is 28 years old.
- Gender: Our male patient
- Marital status: The patient is single.
- Level of education: Our patient's level is baccalaureate + 3 years.
- Professional activity: Our patient is a professional banker.
- History: Psychiatric staff: the patient has a history of depression 4 months before recognition of his pathology.
 - Toxic personnel: tobacco and alcohol but occasional.
 - Judicial staff:riena report
 - Medical-surgical staff: nothing to report.
 - Familial: no psychiatric family history.

2. Characteristics of the Disease:

- The duration of the illness: the illness had been evolving for 4 months before hospitalization in our training.

- The circumstances of discovery: it was discovered during a screening by general assessment carried out by the patient himself.
- The mode of contamination: The patient was contaminated during homosexual relations with multiple partners.
- The psychological reaction to the announcement of the illness: The patient reacted with anxiety-depressive symptoms requiring hospitalization in our training.
- The stage of the disease: Our patient is asymptomatic following the recent discovery of his pathology.
- The existence of other sexually transmitted diseases: our patient does not have any other sexually transmitted diseases added to the virus following a complete assessment carried out in our training, namely CMV, CONDYLOMA, HERPES, HVC, SYPHILIS.
- Therapeutic management: the patient was under antiretroviral treatment including AZT+3TC+EF treatment regimen.

3. The Socio-Family Impact:

- About life as a couple: the patient is single
- About work: the patient resigned from his job suddenly.
- Regarding sexuality: the patient confirms that HIV has had an impact on their sexuality.
- Low health-related quality of life (HQoL^o)
- Reduced sleep times and domestic violence were associated.

4. Psychiatric Evaluation:

A. Psychiatric Disorders:

- Depression is the most common psychiatric disorder diagnosed using the mini DSM;
- Severe depression according to PHQ-9
- Anxiety according to Hamilton objectified moderate anxiety.
- The analysis found a significant relationship between the occurrence of anxiety disorders and the reaction with anxiety-depressive symptoms to the announcement of HIV status.
- The analysis to identify certain risk factors for the occurrence of depression during HIV which are the cessation of work, the presence of an impact of HIV on the patient's leisure and sexuality, the absence of pleasure during sexual intercourse, on the other hand, family support has no psychological impact on the patient's anxiety.

B. Neurocognitive Disorders:

The diagnosis and staging of HAND were established by the presence of a deficiency in 2 or more neurocognitive domains, and this is not the case for our patient whose result was confirmed by MRI.

V-DISCUSSION [2]

A. Psychiatric Manifestations:

1. Depression:

The occurrence of psychiatric disorders in patients with HIV has been described in numerous studies; depression is the manifestation most often reported and best studied.

In a series made in Morocco, depression represents the most frequent psychiatric manifestation, according to the BDI score, the prevalence of depression in our patients is 76.67%, this result is consistent with those found [3], but it is much higher than the results found in other studies [4].

2. Anxiety Disorders:

²Psychological interventions for common mental disorders among people living with HIV in low- and middle-income countries: a systematic review. Dixon Chibanda *et al*. Trop Med Int Santé, 2015

Anxiety disorders represent the second psychiatric disorder noted in our series.

3. Suicidal Risk:

The suicide risk in our study is increased, this is consistent with the result found by Kinyanda *et al.*, who found a prevalence of 7.8% but discordant with the majority of results in the literature.

B. Cognitive Disorders:

Depression has been linked to neuropsychological performance in multiple disorders,^{4,7,48} and we found the greatest proportion of individuals with a HAND diagnosis in the moderate to severe PHQ-9 group.

Current findings indicate that symptoms of depression are common (45%) among HIV/AIDS patients in acute care, although the severity of SD has increased significantly. These results also suggest that SD is associated with specific clinical and demographic factors, but not with sustained immunosuppression or the development of HAND or neurocognitive alterations. Previous studies have reported associations between depression and neurocognitive alterations, including HAND during HIV/AIDS.

C. Clinical Factors:

1. Personal History of Suicide Attempt

In our study, a personal history of suicide attempt represented a risk factor for the occurrence of anxiety disorders and suicidal risk, while there was no significant relationship between a history of TS and the occurrence of depression in our patient with HIV.

2. History of Addiction:

In our study, a history of addiction does not represent a risk factor for the occurrence of psychiatric disorders, whether depression, anxiety disorders or suicide risk.

3. The Duration of the Illness:

In our study there was no significant relationship between the duration of illness and the occurrence of psychiatric disorders. In the literature the results regarding the time elapsed since diagnosis are not clear and need to be examined by further research.

4. The Stage of the Disease:

In our study, no significant relationship was found between stage of the disease and anxiety disorders or suicide risk during HIV.

³ Badiee *et al*. [17] L'akoa *et al*. [48], X. Su *et al*. [18], and Heckman *et al*. [162]. 2018

⁴ Song JY *et al*. [28], Silveira *et al*. [137] and Quereda *et al*.

In the literature Concerning depressive symptomatology, 77.8% of asymptomatic patients and 83.7% of patients who are in stage C of the disease presented depression, we deduce that these two stages represent periods at risk of occurrence of depression in HIV-infected patients.

5. The Psychological Reaction to the Announcement of HIV Status

In our study, the patient who reacted with anxiety-depressive symptoms to the announcement of HIV status and who subsequently presented more anxiety disorders, this is consistent with the results of the literature which showed that a style of Positive adaptation and a fighting spirit have a protective effect against the occurrence of psychiatric disorders, while a poor coping style after the announcement of HIV status exposes one to a high risk of developing psychiatric disorders during HIV.

D. Protective Factors:

In our study, psychological support from the family and membership in an association were not protective factors against the occurrence of psychiatric disorders during the illness.

In the literature several protective factors have been studied, notably membership in psychosocial

support groups, Sikkema *et al.*, found improved quality of life in HIV-infected patients following a support group intervention to help patients cope with AIDS, according to Freeman *et al.*, Patients who were part of a support group were significantly less likely to have a mental disorder diagnosis than those who had never been part of a group.

E. The Socio-Professional Impact:

In our study, the presence of an impact on the patient's leisure and sexuality, as well as the absence of pleasure during sexual intercourse represent risk factors for the occurrence of depression during HIV and the presence of an impact on leisure activities and the absence of sexual pleasure represent risk factors for the occurrence of anxiety disorders during the course of HIV.

V. CONCLUSION

Human immunodeficiency virus (HIV) infection not only affects an individual's physiological integrity, but also their psychological integrity. The psychosocial aspects of HIV infection are varied and can be manifested by different behaviors and emotions specific to the stage of infection.